查询T820供应商

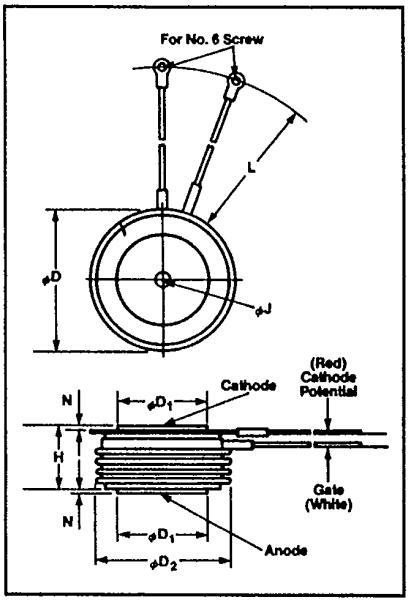
POWEREX

T820

Phase Control SCR

500-600 Amperes Avg
2200-4200 Volts

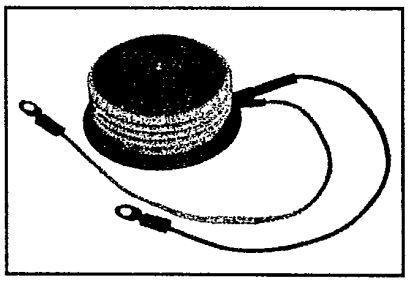
Powerex, Inc. Hillis Street, Youngwood, Pennsylvania 15697 (412) 925-7272
Powerex Europe, S.A., 428 Ave. G. Durand, BP107, 72003 LeMans, France (43) 72.75.15



T82
Outline Drawing

Dimensions	Inches		Millimeters	
	Min.	Max.	Min.	Max.
ϕD	2.250	2.290	57.15	58.17
ϕD1	1.333	1.343	33.86	34.11
ϕD2	2.030	2.090	51.56	53.09
H	1.020	1.060	25.91	26.92
ϕJ	.135	.145	3.43	3.68
L	11.50	12.50	292.10	317.50
N	.040	—	1.02	—

Creep Distance—1.00 in. min. (25.40 mm)
Strike Distance—.69 in. min. (17.53 mm).
(In accordance with NEMA standards.)
Finish—Nickel Plate.
Approx. Weight—8 oz. (227 g).
1. Dimension "H" is clamped dimension.



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Description
Powerex Silicon Controlled Rectifiers (SCR) are designed for phase control applications. These are all-diffused, Press-Pak (Pow-R-Disc) devices employing the field-proven amplifying (di/namic) gate.

Features:
- ☐ Low On-State Voltage
- ☐ High di/dt
- ☐ High dv/dt
- ☐ Hermetic Packaging
- ☐ Excellent Surge and I^2t Ratings

Applications:
- ☐ Power Supplies
- ☐ Battery Chargers
- ☐ Motor Control
- ☐ Light Dimmers
- ☐ VAR Generators

Ordering Information
Example: Select the complete eight digit part number you desire from the table – i.e. T8203050 is a 3000 Volt, 500 Ampere Phase Control SCR.

Type	Voltage*		Current	
	V_{DRM} V_{RRM}	Code	I_T (avg)	Code
T820	2200	22	500	50
	2400	24	600	60
	2600	26		
	2800	28		
	3000	30		
	3200	32		
	3400	34		
	3600	36		
	3800	38		
	4000	40		
	4200	42		

*All voltages not available in all current ratings.

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Absolute Maximum Ratings

	Symbol	T820 _ _ 50	T820 _ _ 60	Units
Maximum Blocking Voltage	V_{DRM}, V_{RRM}	4200	3800	Volts
RMS On-State Current	$I_{T(RMS)}$	785	940	Amperes
Average On-State Current	$I_{T(av)}$	500	600	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (60Hz)③	I_{TSM}	6,000	10,500	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (50Hz)③	I_{TSM}	5,475	9,580	Amperes
Critical Rate-of-Rise of On-State Current (Non-Repetitive)①④⑥	di/dt	100	400	Amperes/μs
Critical Rate-of-Rise of On-State Current (Repetitive)	di/dt	30	150	Amperes/μs
I^2t (for Fusing), One Cycle at 60Hz	I^2t	150,000	459,000	A^2sec
Peak Gate Power Dissipation	P_{GM}	16	16	Watts
Average Gate Power Dissipation	$P_{G(av)}$	3	3	Watts
Storage Temperature	T_{STG}	−40 to 150	−40 to 150	°C
Operating Temperature	T_J	−40 to 125	−40 to 125	°C
Mounting Force①		3000 to 3500	3000 to 3500	lb.
Mounting Force①		1360 to 1590	1360 to 1590	kg

Electrical and Thermal Characteristics

	Symbol	Test Conditions	T820 _ _ 50	T820 _ _ 60	Units
Voltage—Blocking State Maximums②					
Forward Leakage, Peak	I_{DRM}	T_J = 125°C, V_{DRM} = rated	65	35	mA
Reverse Leakage, Peak	I_{RRM}	T_J = 125°C, V_{RRM} = rated	65	35	mA
Current—Conducting State Maximums					
Peak On-State Voltage	V_{TM}	I_{TM} = 1500A, T_J = 25°C	2.3	2.0	Volts
Threshold Voltage	$V_{(TO)}$	T_J = 125°C	.85	.74	Volts
Slope Resistance	r_T	T_J = 125°C	1.1	1.06	mOhm
			T820		
Switching					
Typical Turn-Off Time	t_q	I_T = 250A, T_J = 125°C, di_R/dt = 50A/μsec, reapplied dv/dt = 20V/μsec linear to 0.8V_{DRM}	200		μsec
Typical Turn-On Time④	t_{on}	I_{TM} = 1000A, V_D = 600V	5.0		μsec
Min. Critical dv/dt exponential to V_{DRM}③⑤	dv/dt	T_J = 125°C	300		V/μsec
Thermal					
Maximum Thermal Resistance,① double sided cooling					
Junction to Case	$R_{\theta JC}$		.037		°C/Watt
Case to Sink, Lubricated	$R_{\theta CS}$		.020		°C/Watt
Gate—Maximum Parameters					
Gate Current to Trigger	I_{GT}	T_J = 25°C, V_D = 12V	150		mA
Gate Voltage to Trigger	V_{GT}	T_J = 25°C, V_D = 12V	3.0		Volts
Non-Triggering Gate Voltage	V_{GDM}	T_J = 125°C, rated V_{DRM}	.15		Volts
Peak Forward Gate Current	I_{GTM}		4		Amperes
Peak Reverse Gate Voltage	V_{GRM}		5		Volts

① Consult recommended mounting procedures.
② Applies for zero or negative gate bias.
③ Per JEDEC RS-397, 5.2.2.1.
④ With recommended gate drive.
⑤ Higher dv/dt ratings available, consult factory.
⑥ Per JEDEC standard RS-397, 5.2.2.6.

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T-25-20

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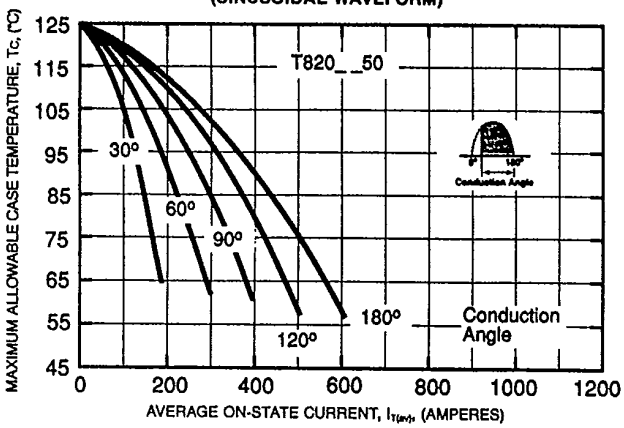
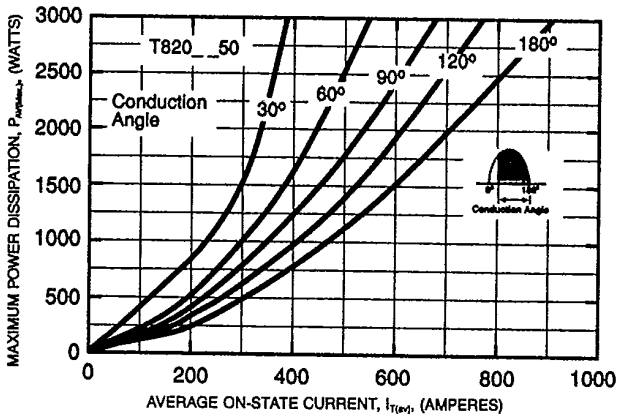
MAXIMUM ALLOWABLE CASE TEMPERATURE (SINUSOIDAL WAVEFORM)



MAXIMUM ON-STATE POWER DISSIPATION (SINUSOIDAL WAVEFORM)



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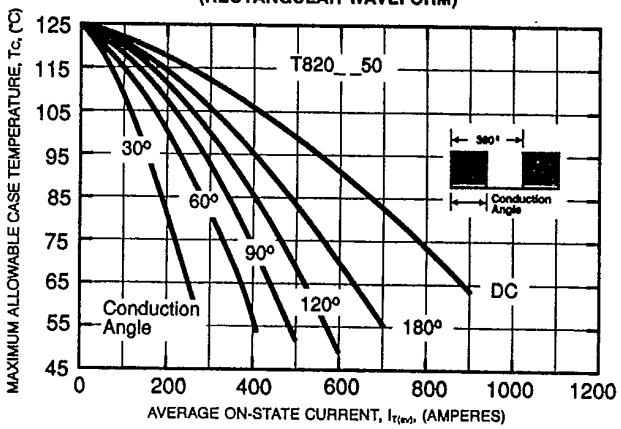

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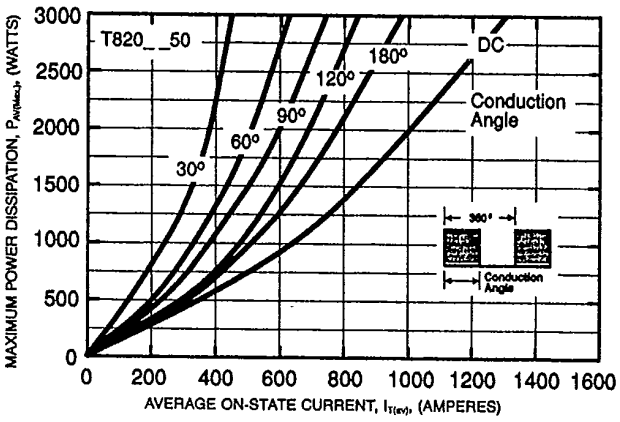

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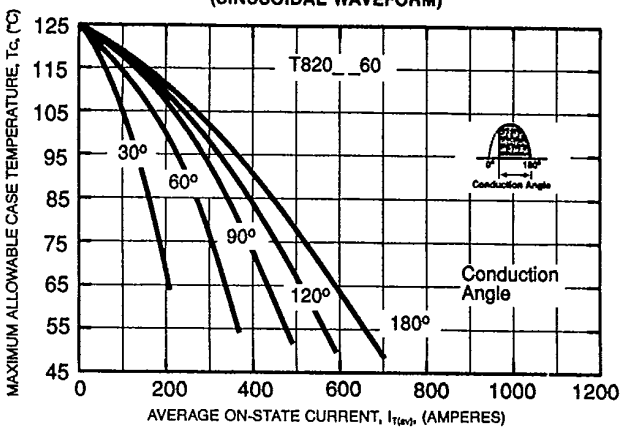

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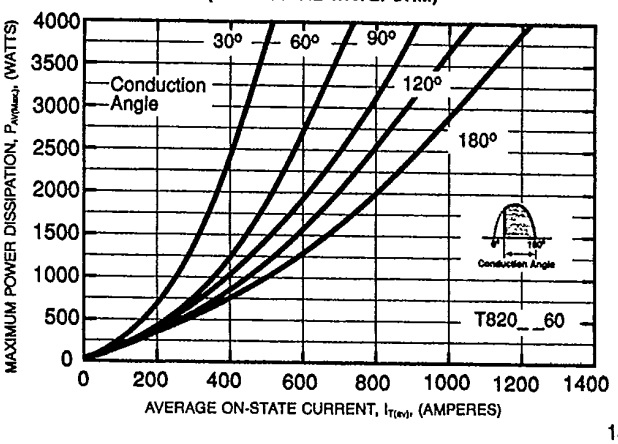

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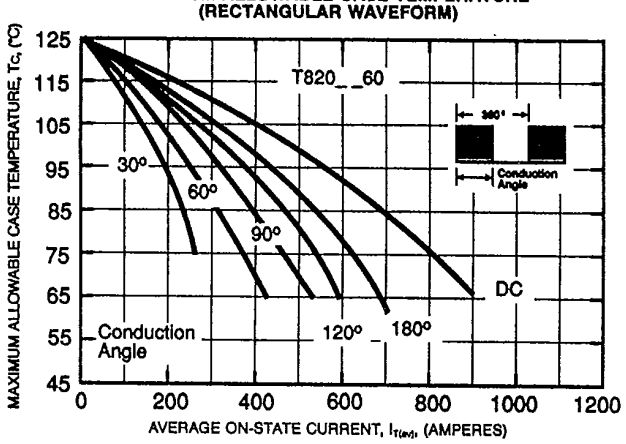

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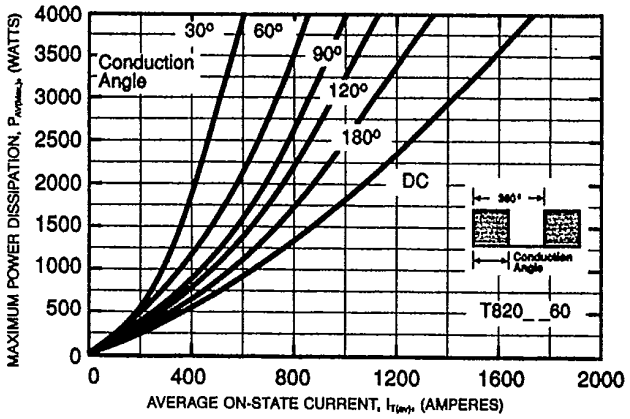

TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS (JUNCTION TO CASE)